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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,925	12/07/2001	Toshiyuki Mima	791 176	5613

25191 7590 01/21/2005

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EXAMINER

KOSOWSKI, ALEXANDER J

ART UNIT PAPER NUMBER

2125

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/010,925

Applicant(s)

MIMA, TOSHIYUKI

Examiner

Alexander J Kosowski

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/18/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

- 1) Claims 1-7 and 15-16 are presented for examination in light of the amendment filed

11/05/04.

***Claim Rejections - 35 USC § 112***

- 2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

Although the specification provides a dictionary for the claims, and the claims may be broader than the specification; each claim must be complete and self consistent in itself. For a method claim, the recitation must describe a sequential operation where each step further limits the previous step. In addition, even though the method claim is procedural, each step must be supported with sufficient physical means for accomplishing the step.

Referring to claims 1 and 16, the claims appear to be a single long preamble. Although they are method claims, there is no recitation of the actual steps being claimed. In addition, the claims state that a pattern is "programmed", yet there is no recitation of the physical means to be programmed (i.e. a computer).

***Claim Rejections - 35 USC § 102***

- 3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4) Claims 1-2, 4-6 and 15 are rejected under 35 U.S.C. 102(b) as being unpatentable by Hesse et al (U.S. Pat 5,274,571).

Referring to claim 1, Hesse teaches a method for running an electric energy storage system which is set up at an electric energy consumer (col. 2 lines 40-45) and capable of controlling an electric energy to be purchased by the electric energy consumer by controlling charge and discharge (col. 2 line 66 through col. 3 line 18), wherein a running pattern of charge and discharge of the electric energy storage system is previously programmed, and the run of the electric energy storage system is controlled on the basis of the previously programmed running pattern (col. 4 lines 20-36).

Referring to claim 2, Hesse teaches that the programmed running pattern is input in a computer control means to control the run of the electric energy storage system by the computer-control means on the basis of the programmed running pattern (col. 4 lines 20-36).

Referring to claim 4, Hesse teaches that an electric fee is always optimized by observing information on purchase of electric power by the electric energy consumer with a communication means and giving instruction to correct running conditions of the electric power storage system (col. 4 lines 37-50).

Referring to claim 5, Hesse teaches that a scale of the electric energy storage system to be introduced is determined so that an electric energy consumption peak is not generated by shaving the electric energy consumption peak in a time zone having the highest peak of electric energy consumption in a situation of electric energy consumption by the electric energy consumer by increasing an amount of consumable electric energy by discharge running of the electric energy

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storage system and by charge running of the electric energy storage system in the other time zones (col. 6 lines 49-64).

Referring to claim 6, Hesse teaches that the scale of the electric energy storage system to be introduced is determined so that an electric fee is reduced by increasing a rate of electric energy purchased by the electric energy consumer in a night time zone by discharge running of the electric energy storage system in a daytime zone and charge running of the electric energy storage system in a nighttime zone (col. 3 lines 55-68 and col. 6 lines 49-64, whereby the scheduler determines that loads may be greatest during the daytime whereby, for instance, workers are present and require HVAC, versus nighttime, when HVAC requirements are lessened).

Referring to claim 15, Hesse teaches that the electric energy consumer is the end-user of the electric energy (col. 2 lines 40-45).

***Claim Rejections - 35 USC § 103***

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hesse.

Referring to claim 3, Hesse teaches the method above. However, Hesse does not explicitly teach that the running pattern is programmed so that a consumption rate of electric energy stored in the electric energy storage system becomes 80% or more.

It is respectfully submitted that the consumption rate of electric energy stored in the electric energy storage system could be any percentage, including 80%, and the skilled artisan would have found it an obvious modification make the consumption rate 80% or more in the method taught by Hesse with the motivation that a high consumption rate would allow for less dependence on power directly from utility suppliers, particularly during high rate times, which would provide a cost savings.

7) Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hesse, further in view of Suzuki et al (U.S. Pat 6,487,508).

Referring to claim 7, Hesse teaches the method above. However, Hesse does not explicitly teach that the electric energy storage system is a system using a sodium sulfur battery.

Suzuki teaches an energy supply system whereby sodium sulfur batteries are used to store excessive power that is produced (col. 3 lines 32-45).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize sodium sulfur batteries in the method taught by Hesse since these could be used to store excessive power produced during nighttime and discharge the power during the daytime (Suzuki, col. 5 lines 6-16).

Referring to claim 16, Hesse teaches a method for running an electric energy storage system which is set up at an electric energy consumer (col. 2 lines 40-45) and capable of controlling an electric energy to be purchased by the electric energy consumer by controlling charge and discharge (col. 2 line 66 through col. 3 line 18), wherein a running pattern of charge and discharge of the electric energy storage system is previously programmed, and the run of the electric energy storage system is controlled on the basis of the previously programmed running

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pattern (col. 4 lines 20-36). However, Hesse does not explicitly teach that the electric energy storage system is a system using a sodium sulfur battery, nor that the running pattern is programmed so that a consumption rate of electric energy stored in the electric energy storage system becomes 80% or more.

Suzuki teaches an energy supply system whereby sodium sulfur batteries are used to store excessive power that is produced (col. 3 lines 32-45).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize sodium sulfur batteries in the method taught by Hesse since these could be used to store excessive power produced during nighttime and discharge the power during the daytime (Suzuki, col. 5 lines 6-16).

In addition, it is respectfully submitted that the consumption rate of electric energy stored in the electric energy storage system could be any percentage, including 80%, and the skilled artisan would have found it an obvious modification make the consumption rate 80% or more in the method taught by Hesse with the motivation that a high consumption rate would allow for less dependence on power directly from utility suppliers, particularly during high rate times, which would provide a cost savings.

#### *Response to Arguments*

8) This response refers to arguments presented by Applicant in the amendment filed 11/5/04.

Referring to arguments regarding claim 1, Applicant argues that Hesse "does not teach that the run of the electric energy storage system is controlled on the basis of the previously programmed running pattern...but rather on the basis of current information and predicted

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running pattern". Examiner maintains the rejection in view of Hesse, and notes that claim 1 merely states that "the run of the electric energy storage system is controlled on the basis of the previously programmed running pattern". This is a very broad statement and the system taught by Hesse reads directly on this claim. Hesse teaches a scheduler which is programmed to charge and discharge an energy storage system. Various factors such as pricing information, temperature, and historical data are taken into account when programming the scheduler. Although an option exists to override the scheduler due to "unforeseeable emergencies", the day-to-day operation of the system taught by Hesse involves the scheduler running the energy storage system based on a programmed schedule of charge and discharge.

Referring to arguments regarding claim 3, Examiner maintains the argument that it would have been obvious to a skilled artisan to make the consumption rate of the energy stored in the electric energy storage system 80% or more to allow for less dependence on power directly from utility suppliers. An infinite number of programmed running patterns could be input into the system taught by Hess, depending on the desired consumption rate.

Referring to arguments regarding new claim 16, see the rejection above.

### ***Conclusion***

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander J Kosowski whose telephone number is 571-272-3744. The examiner can normally be reached on Monday through Friday, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the



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organization where this application or proceeding is assigned is (703) 872-9306. In addition, the examiner's RightFAX number is 571-273-3744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Alexander J. Kosowski  
Patent Examiner  
Art Unit 2125

A handwritten signature in black ink, appearing to read "L. Picard", with a stylized flourish at the end.

**LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100**